

REMARKS

In the Office Action of June 3, 2004, the Examiner approved the drawings of Figures 3 and 4 filed on March 26, 2004 and requested "corrected drawings." The Office Action, however, does not identify any deficiencies in the Figures. Nonetheless, with this filing, Applicants have re-filed Figures 3 and 4 and also submitted formal drawings for Figures 1 and 2. The attached Submission of Formal Replacement Drawings therefore includes formal replacement sheets for Figures 1-4.

In the Office Action, the Examiner also rejected claim 40 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention; rejected claims 22, 28, and 30 under 35 U.S.C. 103(a) as being unpatentable over Ashby et al. (U.S. Patent No. 5,622,184) in view of Cornelius et al. (U.S. Patent No. 5,924,998); rejected claims 22, 25, 26, 30, 32-35, 38, and 39 under 35 U.S.C. 103(a) as being unpatentable over Grenouillet (U.S. Patent No. 5,373,856) in view of Cornelius et al. ('998) and further in view of Finlayson (U.S. Patent No. 5,885,227); and rejected claims 29, 36, and 37 under 35 U.S.C. 103(a) as being unpatentable over Grenouillet ('856) in view of Cornelius et al. ('998) and Finlayson ('227) and further in view of either Beisel (U.S. Patent No. 5,947,940), Whitbourne (U.S. Patent No. 5,997,517), or Lind (U.S. Patent No. 5,067,489).

By this amendment, Applicants amend claims 25, 26, 28-30, and 32-39, cancel claim 40, and add new claims 57-88. Claims 22, 25, 26, 28-30, 32-39, and 57-88 are pending. Of these claims, claims 22, 57, 70, and 84 are independent.

Applicants respectfully traverse the Examiner's rejection of claim 40 under 35 U.S.C. §112, second paragraph. However, in order to expedite prosecution of the

present application, claim 40 has been canceled, thereby rendering the Examiner's rejection moot. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Applicants respectfully traverse the Examiner's rejection of claims 22, 28, and 30 under 35 U.S.C. 103(a) as being unpatentable over Ashby et al. in view of Cornelius et al. Neither reference, taken alone or in combination, teaches or suggests each and every element of independent claim 22. In particular, the applied references at least fail to disclose the claimed combination including "a polymeric tip extending from a distal portion of the coil."

Ashby et al. teaches a guide wire 10 having a core 16 and a spring 30 at end 21 of the core 16 to form the core/spring subassembly 50. A sheath 61 is loaded over the core/spring assembly 50, and along with adhesive 85, fully encloses the core/spring subassembly 50.

Ashby et al., however, does not disclose or suggest at least "a polymeric tip extending from a distal portion of the coil." The Examiner has alleged that the adhesive 85 and spring 30 respectively constitute the polymeric tip and coil recited in claim 22. Adhesive 85, however, does not extend from spring 30. Instead, adhesive 85 plugs an open end of sheath 61, see Fig. 8 and col. 6, lines 54-57, and does not even contact spring 30.

The Examiner has relied on Cornelius et al. solely for the alleged teaching of stainless steel and nickel-titanium alloys being art-recognized equivalents. Thus, the Examiner's proposed combination of Ashby et al. and Cornelius et al. does not suggest

each and every recitation of independent claim 22, and, therefore, claim 22 and its dependent claims are allowable over these references.

Applicants respectfully traverse the rejection of claims 22, 25, 26, 30, 32-35, 38, and 39 under 35 U.S.C. 103 as being unpatentable over Grenouillet in view of Cornelius et al. and further in view of Finlayson. None of these references, taken alone or in combination, teach or suggest each and every element of independent claim 22. In particular, the applied references at least fail to disclose the claimed combination including a “polymeric tip...[that] connects to the core by a polymeric material.”

Grenouillet discloses a catheter guide that is intended to be inexpensive and simple to fabricate. (Col. 1, line 65 to Col. 2, line 2.) Grenouillet’s catheter guide 1 comprises a wire 2 having a proximal part 6 and a distal part 8, and a protective sheath 4 formed by a helicoidal spring wound around the wire 2. The sheath 4 is easily attached to the proximal part 6 of wire 2 by a first solder joint 10. The distal end of sheath 4 includes a second solder joint 16. In accordance with disclosing a guide wire that is inexpensive and simple to manufacture, Grenouillet further discloses that solder joints 10 and 16 are advantageously made without the addition of further material. (Col. 3, lines 33-34.)

In the claim rejection, the Examiner recognizes that Grenouillet does not disclose a polymeric tip that connects to the core by a polymeric material. The Examiner proposes to modify the Grenouillet catheter guide, with the teachings of Finlayson, to include a polymeric tip having radio-opaque material and connected to the core to improve visibility of the catheter guide during medical procedures.

The modification of replacing solder joint 16 of the Grenouillet guide with a polymeric tip that includes radio-opaque material would increase cost, manufacturing time, and complexity. This would eliminate the very benefits expressly taught by Grenouillet of manufacturing a simple, inexpensive guide with end connections and closures “made without the addition of further material.” Ends of solder provide a quick, easy, and inexpensive method of connecting sheath 4 to wire 2 and closing the ends. Thus, the Examiner’s proposal of modifying solder joint 16 to be a polymeric tip that includes radio-opaque material is contradictory to the express teachings, goals, and purposes of the Grenouillet guide wire.

The Examiner has relied on Cornelius et al. solely for the alleged teaching of stainless steel and nickel-titanium alloys being art-recognized equivalents. Thus, the Examiner’s combination of Grenouillet in view of Cornelius et al. and further in view of Finlayson does not suggest each and every recitation of independent claim 22, and, therefore, claim 22 and its dependent claims are allowable over these references.

Applicants respectfully traverse the rejections of claims 29, 36, and 37 under 35 U.S.C. 103 as being unpatentable over Grenouillet in view of Cornelius et al. and Finlayson, and either Beisel, Whitbourne, or Lind. Even if Beisel, Whitbourne, or Lind teach what the Examiner alleges (and Applicants do not necessarily agree that they do), the references fail to overcome the shortcomings of the references discussed above. Therefore, claims 29, 36, and 37 are allowable at least due to their dependence from claim 22.

Applicants have added claims 57-88 to the application. Of these claims, claims 57, 70, and 84 are independent.

Claim 57 is patentably distinguishable over all of the cited references because none of the references, taken alone or in combination, teach or suggest each and every element of claim 57. In particular, the references at least fail to disclose the claimed combination including a core having “a constant diameter along the length.” Accordingly, claim 57, and claims 58-69 dependent therefrom, are patentable.

Claim 70 also is patentably distinguishable over all of the cited references because none of the references, taken alone or in combination, teach or suggest each and every element of claim 70. In particular, the references at least fail to disclose the claimed combination including a coil that “comprises a first coil portion having first pitch and a second coil portion having a second pitch greater than the first pitch.”

Grenouillet in fact teaches against the invention of claim 70 by disclosing a catheter guide that includes strands wound with a first pitch P1 and a second pitch P2 during fabrication, yet, when assembled, the strands compress each other to maintain a cohesion between the windings. (Col. 4, line 44 to Col. 4, line 3.) Thus, as shown in Fig. 1, the pitch between successive windings is constant. Grenouillet in fact states that “the pitches P1 and P2 represent[] imaginary pitches because all of the windings of the spring are joined.” (Col. 4, lines 16-20.) Only if the windings were free, would the windings have two differing pitches. (Col. 3, line 44 to Col. 4, line 3.) Thus, unlike the present invention, the completed catheter guide of Grenouillet comprises a coil having windings of a single pitch. Accordingly, claim 70 is patentable over the references, and claims 71-83 are patentable at least due to their dependence from claim 70.

Claim 84 also is patentably distinguishable over all of the cited references because none of the references, taken alone or in combination, teach or suggest each

and every element of claim 84. In particular, the references at least fail to disclose the claimed combination including "a continuous multifilar cross-wound coil." Accordingly, claim 84, and claims 85-88 dependent therefrom, are patentable.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In discussing the specification, claims, and drawings in this Reply, it is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicants believe that Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

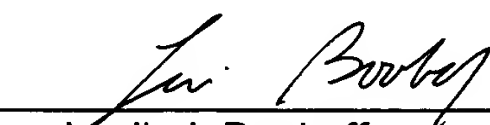
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: September 3, 2004

By: 
Leslie I. Bookoff
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Attachments: Drawings Replacement Sheets (2 Sheets).